



**United States Environmental Protection Agency
Region 9 Laboratory**

**1337 S. 46th Street Building 201
Richmond, CA 94804**

Date: 2/13/2012

Subject: Analytical Testing Results - Project R33911
SDG: 12037A

From: Brenda Bettencourt, Director
EPA Region 9 Laboratory
MTS-2

To: Richard Fetzer
US EPA Region 3, Eastern Response Branch
3HS31

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Dissolved Hydrocarbon Gases by GC



United States Environmental Protection Agency
Region 9 Laboratory

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Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Richard Fetzer

Project Number: R33911

Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch

100 Gypsum Road

Stroudsburg PA, 18360

SDG: 12037A

Reported: 02/13/12 15:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
HW40	1202013-01	Water	02/02/12 15:39	02/04/12 15:35
HW40-P	1202013-02	Water	02/02/12 15:44	02/04/12 15:35
HW41	1202013-03	Water	02/02/12 16:12	02/04/12 15:35
HW41-P	1202013-04	Water	02/02/12 15:54	02/04/12 15:35
TB18	1202013-05	Water	02/02/12 08:05	02/04/12 15:35
HW28a	1202013-06	Water	02/03/12 11:49	02/04/12 15:35
HW28a-P	1202013-07	Water	02/03/12 11:52	02/04/12 15:35
HW39	1202013-08	Water	02/03/12 10:42	02/04/12 15:35
HW39-P	1202013-09	Water	02/03/12 11:13	02/04/12 15:35
TB19	1202013-10	Water	02/03/12 07:20	02/04/12 15:35
TB17	1202013-11	Water	02/02/12 08:00	02/04/12 15:35
TB20	1202013-12	Water	02/03/12 07:25	02/04/12 15:35
FB10	1202014-01	Water	02/03/12 14:09	02/06/12 09:15
HW09	1202014-02	Water	02/03/12 15:20	02/06/12 09:15
HW09-P	1202014-03	Water	02/03/12 15:16	02/06/12 09:15
HW28b-P	1202014-04	Water	02/03/12 14:27	02/06/12 09:15
TB22	1202014-05	Water	02/03/12 11:17	02/06/12 09:15
TB21	1202014-06	Water	02/03/12 07:56	02/06/12 09:15

SDG ID 12037A

Small amounts of methane were detected in the method blanks, field blanks and trip blanks. The highest level for a blank in this delivery group (received 2/4/12) was 3.2 ug/L in sample 1202013-05 (TB18). Reported methane values less than or equal to 16 ug/L in field samples are flagged as estimates due to possible contamination.

Work Order(s)

1202013

1202014



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID:	1202013-01	Water - Sampled: 02/02/12 15:39							
Sample ID:	HW40	Dissolved Gases by RSK-175							
Methane		1.4	B1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			112 %	66.4-153%		"	"	"	
Lab ID:	1202013-02	Water - Sampled: 02/02/12 15:44							
Sample ID:	HW40-P	Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			111 %	66.4-153%		"	"	"	
Lab ID:	1202013-03	Water - Sampled: 02/02/12 16:12							
Sample ID:	HW41	Dissolved Gases by RSK-175							
Methane		4.0	B1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	66.4-153%		"	"	"	
Lab ID:	1202013-04	Water - Sampled: 02/02/12 15:54							
Sample ID:	HW41-P	Dissolved Gases by RSK-175							
Methane		3.8	B1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			114 %	66.4-153%		"	"	"	
Lab ID:	1202013-05	Water - Sampled: 02/02/12 08:05							
Sample ID:	TB18	Dissolved Gases by RSK-175							
Methane		3.2	B1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			117 %	66.4-153%		"	"	"	
Lab ID:	1202013-06	Water - Sampled: 02/03/12 11:49							
Sample ID:	HW28a	Dissolved Gases by RSK-175							
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	66.4-153%		"	"	"	
Lab ID:	1202013-07	Water - Sampled: 02/03/12 11:52							



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202013-07						Water - Sampled: 02/03/12 11:52			
Sample ID: HW28a-P						Dissolved Gases by RSK-175			
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		113 %		66.4-153%		"	"	"	
Lab ID: 1202013-08						Water - Sampled: 02/03/12 10:42			
Sample ID: HW39						Dissolved Gases by RSK-175			
Methane	RE2	8,100		97	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		5.3		1.2	"	"	"	02/07/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		115 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		116 %		66.4-153%		"	"	02/08/12	
Lab ID: 1202013-09						Water - Sampled: 02/03/12 11:13			
Sample ID: HW39-P						Dissolved Gases by RSK-175			
Methane		27		1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		116 %		66.4-153%		"	"	"	
Lab ID: 1202013-10						Water - Sampled: 02/03/12 07:20			
Sample ID: TB19						Dissolved Gases by RSK-175			
Methane		2.4	B1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		116 %		66.4-153%		"	"	"	
Lab ID: 1202013-11						Water - Sampled: 02/02/12 08:00			
Sample ID: TB17						Dissolved Gases by RSK-175			
Methane		1.6	B1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		116 %		66.4-153%		"	"	"	
Lab ID: 1202013-12						Water - Sampled: 02/03/12 07:25			
Sample ID: TB20						Dissolved Gases by RSK-175			
Methane		1.3	B1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		115 %		66.4-153%		"	"	"	



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202014-01							Water - Sampled: 02/03/12 14:09		
Sample ID: FB10							Dissolved Gases by RSK-175		
Methane		1.3	B1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		102 %		66.4-153%		"	"	"	
Lab ID: 1202014-02							Water - Sampled: 02/03/12 15:20		
Sample ID: HW09							Dissolved Gases by RSK-175		
Methane		4.3	B1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		113 %		66.4-153%		"	"	"	
Lab ID: 1202014-03							Water - Sampled: 02/03/12 15:16		
Sample ID: HW09-P							Dissolved Gases by RSK-175		
Methane		1.8	B1, J	1.2	ug/L	B2B0024	02/06/12	02/07/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		116 %		66.4-153%		"	"	"	
Lab ID: 1202014-04							Water - Sampled: 02/03/12 14:27		
Sample ID: HW28b-P							Dissolved Gases by RSK-175		
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		117 %		66.4-153%		"	"	"	
Lab ID: 1202014-05							Water - Sampled: 02/03/12 11:17		
Sample ID: TB22							Dissolved Gases by RSK-175		
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		112 %		66.4-153%		"	"	"	
Lab ID: 1202014-06							Water - Sampled: 02/03/12 07:56		
Sample ID: TB21							Dissolved Gases by RSK-175		
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0024	02/06/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		112 %		66.4-153%		"	"	"	



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2B0024 - RSK175 - Dissolved HC Gases

Prepared: 02/06/12 Analyzed: 02/07/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0024-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	72.2			"	66.5		109	66.4-153		
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LCS (B2B0024-BS1)

Methane	33.9			1.2 ug/L	44.1		77	70-130		200
Ethane	70			1.2 "	83.2		84	77-137		200
Ethene	64.6			1.1 "	78.3		83	78-138		200

Surrogate: Acetylene	57.6			"	72.0		80	66.4-153		
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Matrix Spike (B2B0024-MS1)

Source: 1202013-08

Methane	Not Reported	C2, Q10		1.2 ug/L	44.1	6,720	NR	70-130		20
Ethane	90.9			1.2 "	83.2	5.34	103	70-130		20
Ethene	79.6			1.1 "	78.3	ND	102	70-130		20

Surrogate: Acetylene	71.2			"	72.0		99	66.4-153		
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Matrix Spike Dup (B2B0024-MSD1)

Source: 1202013-08

Methane	Not Reported	C2, Q10		1.2 ug/L	44.1	6,720	NR	70-130	34	20
Ethane	89.1			1.2 "	83.2	5.34	101	70-130	2	20
Ethene	79.1			1.1 "	78.3	ND	101	70-130	0.7	20

Surrogate: Acetylene	70.0			"	72.0		97	66.4-153		
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Batch B2B0041 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/09/12
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0041-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	73.5			"	66.5		111	66.4-153		
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LCS (B2B0041-BS1)

Methane	44.9			1.2 ug/L	44.1		102	70-130		200
Ethane	88.6			1.2 "	83.2		106	77-137		200
Ethene	83.2			1.1 "	78.3		106	78-138		200

Surrogate: Acetylene	76.2			"	72.0		106	66.4-153		
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Qualifiers and Comments

Q10 The analyte concentration in the unfortified sample is significantly greater than the concentration spiked into the matrix spike and matrix spike duplicate. The reported spike recovery is not a meaningful measure of the dataset's analytical accuracy.

NR Not Reported

J The reported result for this analyte should be considered an estimated value.

C2 The reported concentration for this analyte is above the calibration range of the instrument.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.